

Application Serial No. 10/790,267
Amendment dated June 19, 2006
Reply to Office Action dated March 17, 2006

Amendments to the Specification:

Please replace paragraph [0004] with the following amended paragraph:

[0004] Typically, the compressor used with a refrigerated cabinet, such as in a CRS installed in the cabinet, is selected to have a capacity that is sufficient meet the expected peak cooling load of the refrigerated cabinet. For example, vending machines must often cool products from an ambient temperature to a predetermined storage temperature within a predetermined time period. The initial cooling load generated by loading a vending machine with ambient temperature products can be relatively significant. Oftentimes, the compressor for such vending machines ~~[[are]]~~ is selected on the basis of whether the maximum rated capacity of the compressor is sufficient to meet the maximum load that such a vending machine would experience when it is fully loaded with ambient temperature products. When the compressor is selected on this basis, the compressor will often be larger than necessary for the loading conditions most frequently experienced by the vending machine and the efficiency of the compressor will be less than optimal.

Please replace paragraph [0016] with the following amended paragraph:

[0016] In general operation, refrigerant vapor enters compressor 18 at a relatively low suction pressure. Compressor 18 compresses and discharges the refrigerant vapor at a higher discharge pressure. The compression of the refrigerant vapor also increases the temperature of the refrigerant vapor. After being discharged from compressor 18, the high pressure refrigerant enters high pressure heat exchanger 20. In the illustrated embodiment, the vapor compression system 10 ~~is a convention~~ conventional subcritical system wherein the discharged refrigerant is at a subcritical pressure and high pressure heat exchanger 20 is commonly referred to as a condenser. The present invention, however, may also be used in transcritical systems, such as those using carbon dioxide as a refrigerant, wherein the refrigerant is discharged from the compressor at a supercritical pressure. In such transcritical systems, the high pressure heat exchanger is commonly referred to as a gas cooler instead of a condenser. Heat exchanger 20 includes an air moving device in the form of fan 24 mounted adjacent to the coils 25 of the heat exchanger 20. Fan 24 blows ambient air across the coils of heat exchanger 20 to cool the refrigerant within the coils 25 and thereby condense the high

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pressure refrigerant into a liquid state. Compartment 14 of cabinet 12 is provided with vent openings to allow for the ingress and egress of the ambient air being forced across the coils of heat exchanger 20 by fan 24.

Please replace paragraph [0020] with the following amended paragraph:

[0020] Figure 3 illustrates the cooling of two separate objects having different Biot numbers. The first object is a metal sheet having a Biot number of 0.35. As shown in Figure 3, the metal sheet generates a cooling load that decreases at a fairly constant and nearly linear rate over time. The second object is a drink bottle having a Biot number of 6. As shown in Figure 3, the drink bottle produces a cooling load that decreases at a very rapid rate as it first begins cooling and then begins to cool at a much slower rate. For example, plastic beverage bottles cool quickly initially, releasing a large amount of heat, but then ~~[[cools]]~~ cool more slowly.